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Firearm Use in G- and PG-Rated Movies, 2008–2012

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Introduction

Popular movies represent a common form of media exposure for children, whether viewed in theaters, on TV, or over the Internet. Based on social cognitive theory, children learn behaviors in part through their exposure to media images.¹ Exposure to violence in media may have a negative impact on children.² From 1995 to 2007, almost a third (31%) of the G- and PG-rated movies with the highest U.S. box-office gross revenues had scenes involving firearms.^{3–5} Movies released during 2008–2012 were examined to determine whether the depiction of firearms in movies marketed to children has changed.

Methods

The original protocol from the 1995–1997 study was used.^{3,6} For each year from 2008 through 2012, the 25 G- or PG-rated movies with the highest annual domestic box-office gross revenues were identified, totaling 125 movies in all. Movies or scenes were excluded if they were animated, not set in the present day, or documentaries. The coding unit was a person-scene, defined as a scene in which one person was shown with a firearm. If two characters in a scene both had firearms, then that would constitute two person-scenes. Possession or handling of firearms was recorded only for characters with speaking roles. All movies were watched in DVD format by the same person. Comparisons between previous studies and 2008–2012 data were analyzed in 2013 by two-sided chi-square tests for trend using EpiInfo, version 3.3, and the Mann–Kendall trend test. Differences were considered significant at $p < 0.05$.

Results

Of 125 movies, 56 (45%) met the study inclusion criteria, with five (9%) G-rated movies and 51 (91%) PG-rated movies. Nineteen (34%) movies depicted characters with firearms (Table 1). Ninety-four person-scenes depicted characters with firearms, with a median of two person-scenes per movie (range, 1–16). Four movies accounted for 59 (63%) person-scenes with firearms.

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Of characters with firearms, all were adults; ninety-two (98%) were male. Sixty (64%) characters with firearms were involved in law enforcement or security (e.g., police officers, soldiers); 23 (24%) were criminals; and 11 (12%) were other characters (e.g., parents, cowboys). Of person-scenes involving firearms, ten (11%) involved fantasy characters (e.g., miniature people and visitors from another planet). Fifty-seven (61%) person-scenes depicted characters handling firearms, and 36 (38%) person-scenes depicted characters making a threatening gesture with a firearm. Twelve (13%) characters discharged a firearm: seven at a person, four at an inanimate object, and one into the air. Two (2%) person-scenes depicted characters injured by gunfire including one person who was killed.

In examining trends over time, the number of movies in which a character made a threatening gesture with a firearm declined significantly as did the number of person-scenes involving the handling of firearms. No other changes were statistically significant.

Discussion

Firearms continue to be shown frequently in G- and PG-rated movies, though there is evidence of declines in certain depictions such as movies in which a character makes a threatening gesture with a firearm and person-scenes in which a firearm is handled. As noted previously, movies rarely showed the consequences of firearm use, including injury and death.³⁻⁵ In the movies examined from 1995 through 2012, there were a total of 82 person-scenes in which a firearm was discharged; only eight (10%) of these scenes resulted in an injury. These types of portrayals may cause children to minimize the hazards of risky behaviors.⁷

This study had at least three limitations. First, the number of movies and person-scenes in selected firearm categories was small, which restricted our ability to detect statistically significant changes from previous studies. Second, including only scenes for characters with speaking roles underestimated the number of person-scenes that children viewed, as movies often depicted nonspeaking characters with firearms. Third, no test of the reliability of data collection was conducted.

Although a direct relationship between media violence and actual firearm violence has not been established, there is evidence of an association between media violence and some measures of aggression and violent behavior.⁸ Parents should be aware that G- and PG-rated movies still frequently depict firearms. Health providers caring for children should provide counseling on violence prevention and media exposure.^{9,10} The entertainment industry should consider the impact of how firearms are depicted in children's movies.

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Movies and person-scenes depicting characters with firearms in G- and PG-rated movies, 1995–2012, *n* (%) unless otherwise indicated

Table 1

Activity	Movies				p-value
	1995–1997 (n=50) ³	1998–2002 (n=61) ⁴	2003–2007 (n=67) ⁵	2008–2012 (n=56)	
Depicting firearm in any context	20 (40)	17 (28)	18 (27)	19 (34)	.53 ^a
Handling a firearm	18 (36)	15 (25)	13 (19)	12 (21)	.07 ^a
Making threatening gesture with firearm	15 (30)	14 (23)	13 (19)	8 (14)	.04^a
Discharging firearm	12 (24)	9 (15)	11 (16)	7 (13)	.17 ^a
Character injured by firearm	3 (6)	1 (2)	1 (2)	2 (4)	.51 ^a
Character killed by firearm	1 (2)	1 (2)	1 (2)	1 (2)	.92 ^a
Person-scenes with firearms					
Activity	1995–1997 (n=127) ³	1998–2002 (n=109) ⁴	2003–2007 (n=106) ⁵	2008–2012 (n=94)	
Mean number per movies depicting firearms	6.4	6.4	5.9	4.9	.15 ^b
Depicting firearm in any context	127	109	106	94	.08 ^b
Handling a firearm	109 (86)	73 (67)	72 (68)	57 (61)	<.001^a
Making threatening gesture with firearm	63 (50)	52 (48)	56 (53)	36 (38)	.22 ^a
Discharging firearm	24 (19)	19 (17)	27 (25)	12 (13)	.63 ^a
Character injured by firearm	4 (3)	1 (1)	1 (1)	2 (2)	.51 ^a
Character killed by firearm	1 (1)	1 (1)	1 (1)	1 (1)	.83 ^a

Note: Boldface indicates statistical significance ($p < 0.05$).

^a χ^2 test for trend.

^b Mann–Kendall trend test.